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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,281	12/09/2003	Jianbing Huang	05-03-014	4973
45113	7590	10/24/2008		
Siemens Corporation Intellectual Property Department 170 Wood Avenue South Iselin, NJ 08830			EXAMINER NGUYEN, KIMBINH T	
			ART UNIT 2628	PAPER NUMBER
			MAIL DATE 10/24/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/731,281

Applicant(s)

HUANG ET AL.

Examiner

KIMBINH T. NGUYEN

Art Unit

2628

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/16/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7, 11-17 and 21-27 is/are allowed.
- 6) ☒ Claim(s) 8-10, 18-20 and 28-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in connection with the decision on appeal.
2. Claims 1-30 were presented in the appeal.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8-10, 18-20 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korobkin (6,912,293) in view of Brokenshire et al. (6,624,810).

Claim 8, Korobkin discloses a method for graphic processing, comprising:
analyzing shapes (triangles) in a graphic object (fig. 15); creating a root node and a list of additional nodes for a binary-space-partition tree (col. 17, lines 56-62), performing a partition plane selection for each additional node, classifying the shapes at the additional node according to the partition plane selection (col. 15, lines 51-63); and creating child nodes according to the shape classification (leaf nodes; col. 15, lines 64-66). Similar, Brokenshire also teaches analyzing shapes (recomputing the sizes of subplanes (Brokenshire, Fig. 8, # 810) creating a root node and a list of additional nodes for a binary-space-partition tree (col. 17, lines 56-62), Brokenshire teaches each node associated with at least one shape (creating a root node A and listing nodes B-G as additional nodes, each node is associated with up to four different subplanes F and

G; and nodes D-G are associated with two subplanes D-G, respectively). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Brokenshire into the BSP tree to accomplish a global visibility sort of the input database of Korobkin system, because once the space has been subdivided into a predetermined number of level of subspaces, the bounding volume of each space or subspace is recomputed such that the bounding volume just contains the object that fits into that level of the BSP tree (col. 7, lines 3-14).

Claim 9, Korobkin discloses each node represents a set of elements located in a 3-D spatial region (col. 19, lines 45-51; figs. 9a, 9b).

Claim 10, Korobkin discloses the shapes are triangles (col. 15, line 37; Fig. 5a).

Claims 18-20 the rationale provided in the rejection of claims 8-10 are incorporated herein.

Claims 28-30 the rationale provided in the rejection of claims 8-10 are incorporated herein. In addition, Korobkin teaches a computer program product tangibly embodied in a machine-readable medium (col. 7, lines 6-50).

Allowable Subject Matter

5. Claims 1-7, 11-17, 21-27 are allowed.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimbinh T. Nguyen whose telephone number is (571) 272-7644. The examiner can normally be reached on Monday to Friday from 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao Wu can be reached at (571) 272-7761. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 23, 2008

/Kimbinh T. Nguyen/
Primary Examiner, Art Unit 2628